MEMORANDUM DM 97-17

DATE: December 5, 1997

TO: All Underground Coal Mine Operators

FROM: Frank A. Linkous
Chief, Division of Mines

SUBJECT: On-Site Examination Of Mine Foremen By A Mine Inspector

In 1994, the General Assembly amended Section 45.1-161.35 of the Coal Mine Safety Laws of Virginia to require that the Board of Coal Mining Examiners "revoke the first class mine foreman certificate of any mine foreman who fails to display a thorough understanding of the roof control plan and ventilation for the area of the mine for which he is responsible for implementing, when examined on site by a mine inspector in accordance with guidelines promulgated by the Board". **These guidelines were adopted by the Board and became effective August 21, 1997. The Board approved the pool of questions to be used in conducting the on site examination at it's September 23, 1997 meeting.** DMME mine inspectors have received training and instruction in the guidelines and procedures for implementation of this standard and will begin to use them where appropriate, after January 1, 1998.

You are being provided a copy of Parts IV and V of Chapter 20, Board of Coal Mining Examiners Certification Requirements which address "On-Site Examination of Mine Foreman" and "Guidelines For On-Site Examination Of A Mine Foreman".

Also, attached is the pool of questions which will be used for on-site examinations administered by mine inspectors.

You are encouraged to make available and review this information with underground mine foremen within your organization. Should you have any questions concerning this matter, please feel free to contact me at 540/523-8226.

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Attachment (s)

Part IV
On-Site Examination of Mine Foreman

4VAC25-20-340. Examinations.

A. When a mine is issued a closure order or violation related to a hazardous roof or ventilation condition, the mine foreman may be examined to determine his knowledge of the roof control plan and ventilation requirements in the area of his responsibility at the mine. The examination shall be conducted on the surface at the mine site on the day the violation or closure order is issued.

B. The chief shall develop a pool of no more than 50 questions addressing the areas listed in subsection D of this section, which shall be approved by the BCME. These questions shall be available on request and should be incorporated as part of continuing education and other training for mine foremen.

C. A division inspector shall administer a written examination using 10 questions from the approved pool. The foreman shall answer eight out of 10 questions correctly to demonstrate thorough understanding of the mine's roof or ventilation plans. The inspector shall select questions from the pool which are most relevant to the conditions or practices resulting in the order of closure or violation.

D. The mine foreman may refer to roof control, ventilation, bleeder, or other plans available to him when examined at the surface of an underground mine. Any mine foreman performing tasks requiring certification or otherwise directing work in ventilation or roof support shall be able to provide the following information:

1. Describe the roof control requirements set out in the mine's roof control plan in the area of the foreman's responsibility.

2. Describe the frequency and methods of any required testing of roof, face and ribs in the area of the foreman's responsibility.

3. Show how the roof control practices in the area of the foreman's responsibility comply with the requirements of the roof control plan.

4. Describe the frequency and contents of any pre-shift, on-shift, and when applicable, weekly examinations of mine ventilation required in the area of the foreman's responsibility.

5. Describe the requirements for action under the mine's fan stoppage plan in the area of the foreman's responsibility.

6. Describe any requirements for face ventilation controls used in the area of the foreman's responsibility.

7. Describe any requirements under the mine bleeder plan in the area of the foreman's responsibility.

8. Describe the requirements for mine ventilation controls such as regulators, ventilation doors, and other similar controls in the area of the foreman's responsibility.

9. Describe the minimum volume of air required in the area of the foreman's responsibility.

10. Describe the minimum requirements for quality of air (oxygen, carbon dioxide, and methane) in the area of the foreman's responsibility.

11. Describe the procedure to follow in the area of the foreman's responsibility upon an accumulation of methane at:

a. 1.0% or greater not less than 12 inches from the roof, face, ribs, or floor;

b. Greater than 1.0% in a split that ventilates any group of active areas;

c. 1.5% (or 2.0% as applicable) in a split of air returning from areas where coal is being extracted or is capable of being extracted; or

d. 5.0% or greater in any area of the mine.

E. The division inspector completing an examination of a foreman under this part shall discuss the results of the exam with the foreman before leaving the mine.

Statutory Authority

§§45.1-161.28, 45.1-161.29, 45.1-161.34 and 45.1-161.35 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 13, Issue 22, eff. August 20, 1997.

4VAC25-20-350. Actions brought before the BCME.

A. The examination shall be the basis of any enforcement action brought before the board for failure to display a thorough understanding of the roof control plan and ventilation for the area of the mine for which he is responsible.

B. Refusal of the foreman to submit to examination will constitute just cause to be brought before the board and may result in suspension of certification and revocation of certification by the board.

Statutory Authority

§§45.1-161.28, 45.1-161.29, 45.1-161.34 and 45.1-161.35 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 13, Issue 22, eff. August 20, 1997.

Part V
On-Site Examination of Mine Foreman

4VAC25-20-360. Purpose and scope.

A. Section 45.1-161.35 A of the Code of Virginia provides for on-site examination of a mine foreman by a mine inspector to determine that the foreman has a thorough understanding of the roof control plan and ventilation for the area of the mine for which he is responsible. The procedures followed by the inspector in conducting an on-site examination of a mine foreman must be consistent with requirements in Part IV (4VAC25-20-340 et seq.) of this chapter. This includes the use of questions approved by the board which are administered in accordance with this chapter.

B. The purpose of examining a mine foreman is to measure and evaluate his knowledge and understanding of mine roof control and ventilation for the areas of his responsibility. Mine foremen are required to demonstrate this and other elements of mine safety when they become certified to act as mine foremen in the Commonwealth of Virginia.

C. An on-site examination by the mine inspector will only be initiated when there is just cause that the foreman has failed to maintain safe roof control and ventilation for his area of responsibility at the mine. Just cause for an on-site examination of a mine foreman by a mine inspector must be based on issuance of an order of closure or violation related to a hazardous condition pertaining to roof control or ventilation.

Statutory Authority

§§45.1-161.28, 45.1-161.29, 45.1-161.34 and 45.1-161.35 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 13, Issue 22, eff. August 20, 1997.

4VAC25-20-370. Determination by the inspector to conduct an on-site examination.

A. An order of closure issued in accordance with §45.1-161.91 of the Code of Virginia, or notice of violation issued in accordance with §45.1-161.90 of the Code of Virginia that relate to roof control or ventilation hazards, shall be reviewed at the time it is issued for evidence of mine foreman negligence, which could require on-site examination of the mine foreman by the mine inspector. In making the determination whether or not to conduct an on-site examination, the mine inspector must establish the following:

1. The roof or ventilation hazards cited resulted from performing his duties with less than ordinary care. Ordinary care means the use of such care as a reasonably prudent and careful mine foreman could use under similar circumstances.

2. The mine foreman knew or should have known of the existence of the hazardous condition.

B. When these criteria have been established, the mine inspector will undertake an on-site examination of the mine foreman.

Statutory Authority

§§45.1-161.28, 45.1-161.29, 45.1-161.34 and 45.1-161.35 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 13, Issue 22, eff. August 20, 1997.

4VAC25-20-380. Notification of intent to conduct an on-site examination.

A. The mine inspector will notify the mine foreman of an order of closure or notice of violation for a hazardous condition related to roof control or ventilation in the area of the foreman's responsibility. The inspector will let him know that he intends to invoke the provision of the law for an on-site examination of the foreman.

B. The following approach will be taken by the mine inspector in giving notice to the mine foreman:

1. The notification will be given by the inspector in private.

2. The inspector will be courteous and professional in explaining the reason for the on-site examination.

3. The inspector will explain the procedures he will follow in conducting the on-site examination.

Statutory Authority

§§45.1-161.28, 45.1-161.29, 45.1-161.34 and 45.1-161.35 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 13, Issue 22, eff. August 20, 1997.

4VAC25-20-390. Procedures for conducting on-site examination.

A. The on-site examination of the mine foreman will be handled in such a way as to not prevent the foreman from performing his duties. The on-site examination must be conducted, to the extent possible, immediately on arrival outside on the surface on the day the order of closure or notice of violation is issued.

B. These procedures will be followed in conducting the on-site examination:

1. The examination will be administered in a written format.

2. Ten questions selected by the mine inspector will be written out by the mine inspector on paper for use in the on-site examination.

3. The mine inspector will choose the 10 questions from the approved pool.

4. The mine inspector will choose the 10 questions related to the condition or practice being cited by the order of closure or notice of violation.

5. The mine foreman will be provided sufficient time to write out his answers to the questions. He may refer to plans or other information available to him. However, no other person may assist him in answering the questions. The mine inspector will remain with the mine foreman during the written examination.

6. The mine inspector will read the questions being asked to the mine foreman if requested and should answer any questions from the mine foreman which could help to clarify his understanding of the questions.

7. The mine foreman may respond to the questions orally. In this case, the mine inspector will record the response of the mine foreman to each question on the examination form, have the foreman sign the form as accurately representing the response, and provide the mine foreman a copy promptly upon completion.

Statutory Authority

§§45.1-161.28, 45.1-161.29, 45.1-161.34 and 45.1-161.35 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 13, Issue 22, eff. August 20, 1997.

4VAC25-20-400. Results of the on-site examination.

A. The mine inspector will promptly check the responses given by the mine foreman for each of the 10 questions asked. At least eight of the 10 questions must be answered correctly to successfully complete the on-site examination. The results of the on-site examination will be reviewed promptly with the mine foreman. A copy of the written on-site examination competed by the mine foreman will be provided to him promptly by the mine inspector.

B. The circumstances related to the on-site examination of the mine foreman, including pass or fail results, will be described in the inspector's report, and will be reviewed as part of the closeout of the scheduled inspection activity for the mine.

C. The chief will notify the mine foreman and mine operator in writing of the petition to the BCME for a formal hearing. Should a petition for a hearing be requested, the hearing would be conducted in accordance with Part VI (4VAC25-20-410 et seq.) of this chapter.

D. If a foreman successfully appeals a violation which resulted in an on-site evaluation and further establishes to the BCME that he had a thorough knowledge of such plans, then the failure of the on-site examination shall not be used in any other revocation against the foreman.

Statutory Authority

§§45.1-161.28, 45.1-161.29, 45.1-161.34 and 45.1-161.35 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 13, Issue 22, eff. August 20, 1997.

ROOF CONTROL QUESTIONS

For use with the Board of Coal Mining Examiners Certification Requirements, Part IV, On-site Examination of Mine Foremen, effective August 20, 1997.

1. **Describe the roof bolt pattern and sequence of installation, including torque ranges if applicable, that are required by the approved roof control plan for your mine.**

2. **What is the minimum size and the length of roof bolts according to the approved roof control plan for your mine?**

3. **What steps shall be followed when setting the ATRS in the following situations?**
   A. ATRS will not set firmly against the mine roof.

   B. During a normal roof bolting cycle.

   C. If the ATRS system is inoperative.

4. **When is the only time that a miner may proceed inby the last row of permanent support?**

5. **In accordance with the approved roof control plan, what must be done before traveling or working inby an opening which creates an intersection that is not permanently supported?**

6. **Describe the widths allowed on turns for crosscuts according to the approved roof control plan.**

7. **According to the approved Roof Control Plan, what conditions would indicate that supplemental roof support must be used?**

8. **According to the approved roof control plan, what are the criteria for determining whether "deep or extended cuts" may be mined?**

9. **Describe instructions you would give for rehabilitating deteriorated roof.**

10. **If a remote control continuous miner is used, where is the operator to be positioned during mining and during tramming of the machine?**

11. **According to the mine's approved roof control plan, explain how the direction and the projections of entries, crosscuts, rooms or pillar splits are controlled on your section?**

12. **According to the mine's approved roof control plan, what are the dimensions for the following?**
    (A) Entry width(s)

    (B) Minimum crosscut centers

    (C) Minimum entry centers

13. **What action is required when the majority of roof bolts spot checked or evaluated are not within the minimum and maximum torque ranges specified in the approved roof control plan?**

14. **According to the mine's approved roof control plan, what must be done when the mine roof is susceptible to sloughing?**

15. **Draw a sketch which shows a row of pillars to be mined according to the approved roof control plan.**
    a. **Draw in the breakers to be installed before pillar recovery begins.**
    b. **Show the location and sequence of roadway and turn posts to be installed.**
    c. **Number the sequence of pillar cuts to be taken as required by the approved pillar plan.**

16. **What are the minimum size of stumps or fenders that are required to be left in accordance with the approved Pillar Plan?**

17. **According to the mine's approved roof control plan, describe the normal procedures for examinations of roof, face and ribs.**
    (A) How?
    (B) When?
    (C) Where?

18. **According to the mine's approved roof control plan, what must be done if pillars are to be split or slabbed for the installation of belt or track?**

19. **What actions are required by the Coal Mine Safety Laws of Virginia if loose roof, ribs, or face are found during examinations, or are reported to you?**

20. **If cracks, slips, water and/or other indications of roof hazards are encountered during pillar extraction or advance mining, what action shall the mine foreman take as required by the approved roof control plan at this mine?**

21. **According to the approved roof control plan, how many temporary supports shall be available for roof support and where must they be located?**

22. **What is the relationship between the drill steel, length of roof bolt and resin cartridge being installed according to the approved roof control plan for resin or point anchor roof bolts?**

23. What are the roof control plan requirements for test holes?

23. **According to the mine's approved roof control plan, what are the requirements when mining approaches within 150 feet of the outcrop?**

24. According to the Mine Safety Act and approved roof control plan for this mine, what must be done if a roof fall occurs?

A. If the roof fall will be cleaned up?

B. If the roof fall will not be cleaned up?

C. If the roof fall occurs in an active area at or above the anchorage horizon where mine roof is supported by roof bolts?

VENTILATION QUESTIONS

For use with the Board of Coal Mining Examiners Certification Requirements, Part IV, On-site Examination of Mine Foremen, effective August 20, 1997.

1. **What is the minimum quantity of air required in the last open crosscut and at the intake end of a pillar?**

2. **What is the minimum quantity of air required by the Coal Mine Safety Laws of Virginia at each working face where coal is being mined, drilled for blasting, or loaded?**

3. **Describe how the Coal Mine Safety Laws of Virginia require that line brattice be used from the last open breakthrough of an entry or room.**

4. **Describe how the Coal Mine Safety Laws of Virginia require that permanent stoppings be built and maintained between intake and return air courses.**

5. **According to the Coal Mine Safety Laws of Virginia, active face workings shall not be ventilated with air that has passed through certain areas. What are these areas?**

6. **According to the Coal Mine Safety Laws of Virginia, at what point does air on a section become return air, and what is the maximum concentration of methane allowed in the section return before corrective actions are required?**

7. **According to the Coal Mine Safety Laws of Virginia, how often shall hand held methane detectors be calibrated?**

8. **According to the Coal Mine Safety Laws of Virginia, when is a ventilation change that materially affects the main air current or split allowed to be made?**

9. **In accordance with the approved Fan Stoppage Plan, what action shall be taken immediately upon loss of ventilation due to fan stoppage?**

(a) After what time period shall miners be withdrawn from the mine if the fan is not started and ventilation restored?

(b) What action is required prior to miners returning to work after a main fan stoppage?

10. **According to the Coal Mine Safety Laws of Virginia, what is the penalty for tampering with methane monitors or other devices capable of detecting the presence of explosive gases in an underground mine?**

11. **According to the Coal Mine Safety Laws of Virginia, as a section foreman, what is your responsibility for the quantity, quality and direction of air flow on your section?**

12. **According to the Coal Mine Safety Laws of Virginia, describe the locations and circumstances which require tests for methane in your areas of responsibility, whether made by you or others.**

13. **Describe how a proper test for methane must be taken.**

14. **According to state and federal mining laws and regulations, what action shall be taken if 1.2% methane is detected in a working place where the roof drill is operating?**

15. **According to the Coal Mine Safety Laws of Virginia, what action shall be taken if 1.5% or greater methane is detected in a working place where equipment is in operation?**

16. **According to the Coal Mine Safety Laws of Virginia, how frequently shall a methane monitor be functionally checked and how frequently shall the monitor be calibrated?**

17. **According to the Coal Mine Safety Laws of Virginia, what percent of oxygen is required in the minimum air quality where miners work or travel?**

18. **According to the Coal Mine Safety Laws of Virginia, describe the locations where tests for methane are to be conducted as required for on-shift examinations by certified foremen.**

19. **According to the Coal Mine Safety Laws of Virginia, what actions shall be taken by a mine foreman if 5% or greater methane is detected in active workings?**

20. **Describe how you determine that the approved mine bleeder system is functioning properly.**

21. **If hazardous conditions cannot be corrected immediately, what action shall the foreman take?**

22. **According to the Coal Mine Safety Laws of Virginia, what examinations shall the foreman conduct immediately before miners are permitted to enter idle or worked out areas?**

23. Describe how ventilating pressures shall be maintained with regard to pillar lines, return, and gob areas.

24. According to the Coal Mine Safety Laws of Virginia, what actions shall the foreman take if the methane monitor has been intentionally impaired, disconnected, or by-passed?

25. According to the Coal Mine Safety Laws of Virginia, when gas accumulations cause work at entries or faces to cease, who may the foreman allow to remain in the affected area?